IN THE CLAIMS:

1.   (currently amended) A spiral groove in an optical disk comprising:

a wobble, the wobble being a sinusoidal deviation from the centerline of the groove; and

a first plurality of sinusoidal marks located at zero crossings of the wobble, each sinusoidal mark being formed from a sinusoidal deviation of the groove;

wherein the presence of one of the first plurality of sinusoidal marks at one of the zero crossings represents an active bit and the absence of one of the first plurality of sinusoidal marks at one of the zero crossings represents an inactive bit, a plurality of the active bits and the inactive bits ~~representing~~ encoding an information field.

2.   (Previously Presented) The groove of Claim 1, wherein the first plurality of sinusoidal marks has the same amplitude as the wobble.

3.   (Previously Presented) The groove of Claim 1, wherein the first plurality of sinusoidal marks has a frequency greater than the frequency of the wobble.

4.   (Previously Presented) The groove of Claim 3, wherein the first plurality of sinusoidal marks has a frequency 3 to 5 times the frequency of the wobble.

5.   (previously presented) The groove of Claim 1, further comprising a second plurality of sinusoidal marks located at zero crossings of the wobble having a different phase than the first plurality of sinusoidal marks.

6.   (previously presented) The groove of Claim 1, further comprising a second plurality of sinusoidal marks located at zero crossings of the wobble having the same phase as the first plurality of sinusoidal marks.

7. (Previously Presented) The groove of Claim 6, wherein first plurality of sinusoidal marks and the second plurality of sinusoidal marks are adjacent to each other such that they are aligned in a radial direction.

8. (Previously Presented) The groove of Claim 1, wherein the zero crossings are negative zero crossings.

9. (Previously Presented) The groove of Claim 1, wherein the zero crossings are positive zero crossings.

10. (Previously Presented) The groove of Claim 1, further comprising more than one sinusoidal mark in a single cycle of the wobble.

11.-35. (cancelled).

36. (previously presented) The groove of Claim 1, wherein the information field includes at least one of a synchronization mark, a sector information, and an error correction code.

37. (cancelled).